



6264

obsolete
4/62
6264

UHF MEDIUM-MU TRIODE

"PENCIL TYPE" WITH EXTERNAL PLATE RADIATOR

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC):

Under Transmitting Conditions $6.0 \pm 10\%$ volts

Under Standby Conditions 6.3 max. volts

Current at 6.0 volts 0.280 amp

Amplification Factor 40

Transconductance, for dc plate current of 18.5 milliamperes and dc plate voltage of 200 volts 6800 μ mhos

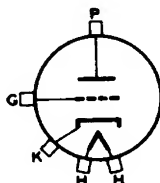
Direct Interelectrode Capacitances:

	With External Shield [▲]	Without External Shield	
Grid to Plate	1.5	1.75	μ mf
Grid to Cathode	—	2.95	μ mf
Plate to Cathode	—	0.07 max.	μ mf

Mechanical:

Terminal Connections:

H: Heater

K: Cathode Cylinder
(Adjacent to
heater-lead
terminals)G: Grid Flange
(Between glass
sections)P: Plate Cylinder
(With integral
radiator)

Mounting Position Any

Dimensions and Terminal

Connections See Dimensional Outline

Radiator Integral part of tube

Cooling:

In many applications, the 6264 does not require forced-air cooling. The radiator in combination with a connector having adequate heat conduction capability will generally provide adequate cooling under conditions of free circulation of air. The cooling must be sufficient to limit the plate-seal temperature to 175°C. When conditions do not provide adequate circulation of air, provision should be made to direct a blast of cooling air from a small blower through the radiator fins. The quantity of air should be sufficient to limit the plate-seal temperature to 175°C. See curves.

Incoming Air Temperature 40 max. °C

Plate-Seal Temperature (Measured on
Plate Seal) 175 max. °C

Weight (Approx.) 24 grams (0.85 oz)

Socket for Heater Leads Cinch No. 54A16325, or equivalent

[▲] A flat plate shield 1-1/4" diameter located parallel to the plane of the grid flange and midway between the grid flange and the radiator plate terminal. The shield is tied to the cathode.

MARCH 1, 1954

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA 1

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UHF MEDIUM-MU TRIODE

RF POWER AMPLIFIER AND OSCILLATOR--Class C Telegraphy

Key-down conditions per tube without amplitude modulation*

CCS*

ICAS**

Maximum Ratings, Absolute Values:

For Pressures Down to 46 mm of Hg**

DC PLATE VOLTAGE	330 max.	400 max.	volts
DC GRID VOLTAGE	-100 max.	-100 max.	volts
DC PLATE CURRENT	40 max.	50 max.	ma
DC GRID CURRENT	25 max.	25 max.	ma
DC CATHODE CURRENT	55 max.	70 max.	ma
PLATE INPUT	13 max.	22 max.	watts
PLATE DISSIPATION	8 max.	13 max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	90 max.	90 max.	volts
Heater positive with respect to cathode	90 max.	90 max.	volts

Typical Operation as Oscillator in Cathode-Drive

Circuit at 500 Mc:

DC Plate Voltage	300	350	volts
DC Grid Voltage†	-25	-30	volts
DC Plate Current	35	35	ma
DC Grid Current (Approx.)	11	13	ma
Useful Power Output (Approx.)	5*	6*	watts

Typical Operation as RF Power Amplifier in

Cathode-Drive Circuit at 500 Mc:

DC Plate Voltage	300	350	volts
DC Grid Voltage†	-42	-45	volts
DC Plate Current	35	40	ma
DC Grid Current (Approx.)	13	15	ma
Driver Power Output (Approx.)	2.4	3	watts
Useful Power Output (Approx.)	7.5*	10*	watts

Maximum Circuit Values (CCS or ICAS Conditions):

Grid-Circuit Resistance	0.1 max.	megohm
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FREQUENCY MULTIPLIER

CCS*

ICAS**

Maximum Ratings, Absolute Values:

For Pressures Down to 46 mm of Hg**

DC PLATE VOLTAGE	300 max.	350 max.	volts
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* Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

†, **, **, †, •: See next page.

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TENTATIVE DATA 1

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UHF MEDIUM-MU TRIODE

DC GRID VOLTAGE	-125 max.	-140 max.	volts
DC PLATE CURRENT	33 max.	45 max.	ma
DC GRID CURRENT	15 max.	15 max.	ma
DC CATHODE CURRENT	45 max.	55 max.	ma
PLATE INPUT	9.9 max.	15.8 max.	watts
PLATE DISSIPATION	6 max.	9.5 max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . . .	90 max.	90 max.	volts
Heater positive with respect to cathode . . .	90 max.	90 max.	volts

Typical Operation as Tripler to 510 Mc in

Cathode-Drive Circuit:

DC Plate Voltage	300	350	volts
DC Grid Voltage†	-110	-122	volts
DC Plate Current	26	36.5	ma
DC Grid Current (Approx.) . . .	4.1	5.8	ma
Driver Power Output (Approx.) .	2.75	4.5	watts
Useful Power Output (Approx.) .	2.1*	3.4*	watts

Maximum Circuit Values (CCS or ICAS Conditions):

Grid-Circuit Resistance	0.1 max.	megohm
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CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	0.260	0.300	ma
Grid-to-Plate Capacitance . .	-	1.50	2.0	μf
Grid-to-Cathode Capacitance .	-	2.50	3.40	μf
Plate-to-Cathode Capacitance .	-	-	0.07	μf
Plate Current	1,2	13	24	ma
Transconductance	1,2	5400	8200	μmhos
Useful Power Output	3,4	6.5	-	watts

Note 1: With 6.0 volts ac or dc on heater.

Note 2: With dc plate voltage of 200 volts, cathode resistor of $100 \pm 1\%$ ohms, and cathode bypass capacitor of 1000 μf .

Note 3: With 5.4 volts ac or dc on heater.

Note 4: With plate voltage of 350 volts, grid resistor adjusted to give a dc plate current of 50 milliamperes in a cavity-type oscillator operating at 500 megacycles per second and having an efficiency of about 75 per cent.

* Corresponds to altitude of about 60000 feet.

Continuous Commercial Service.

Intermittent Commercial and Amateur Service.

• This value of useful power is measured at load of output circuit having an efficiency of about 75 per cent.

† From a grid resistor, or from a suitable combination of grid resistor and fixed supply or grid resistor and cathode resistor.

MARCH 1, 1954

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TENTATIVE DATA 2

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6264

UHF MEDIUM-MU TRIODE

Outline Drawing and
Cooling-Requirement Curves for the 6264
are the same as shown for Type 6263

OPERATING FREQUENCY

The 6264 can be operated as a frequency multiplier and as an rf power amplifier and oscillator with full ratings at frequencies up to 500 megacycles per second and with reduced ratings at frequencies as high as 1700 megacycles per second.

MARCH 1, 1954

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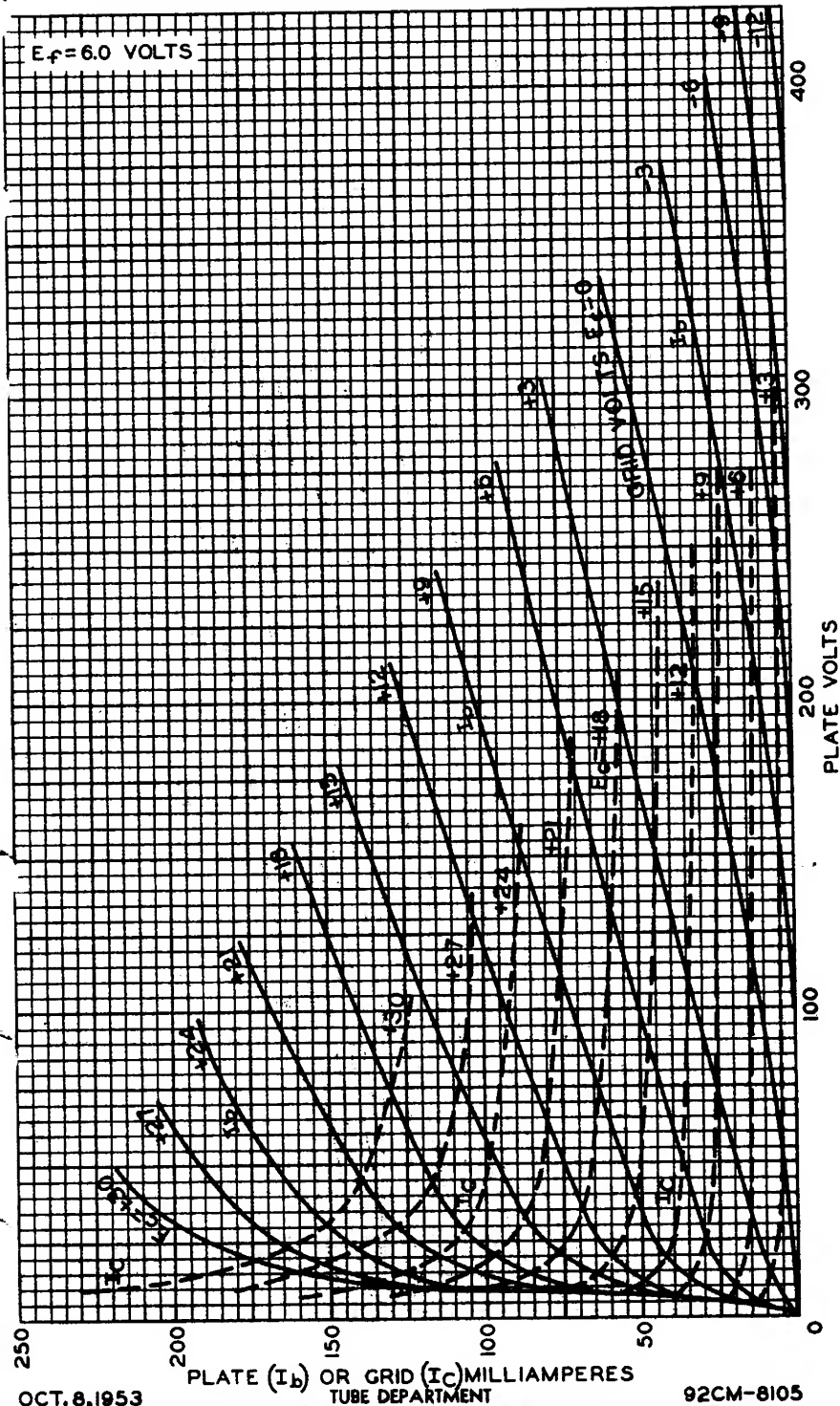
TENTATIVE DATA 2



6264

6264

AVERAGE PLATE CHARACTERISTICS

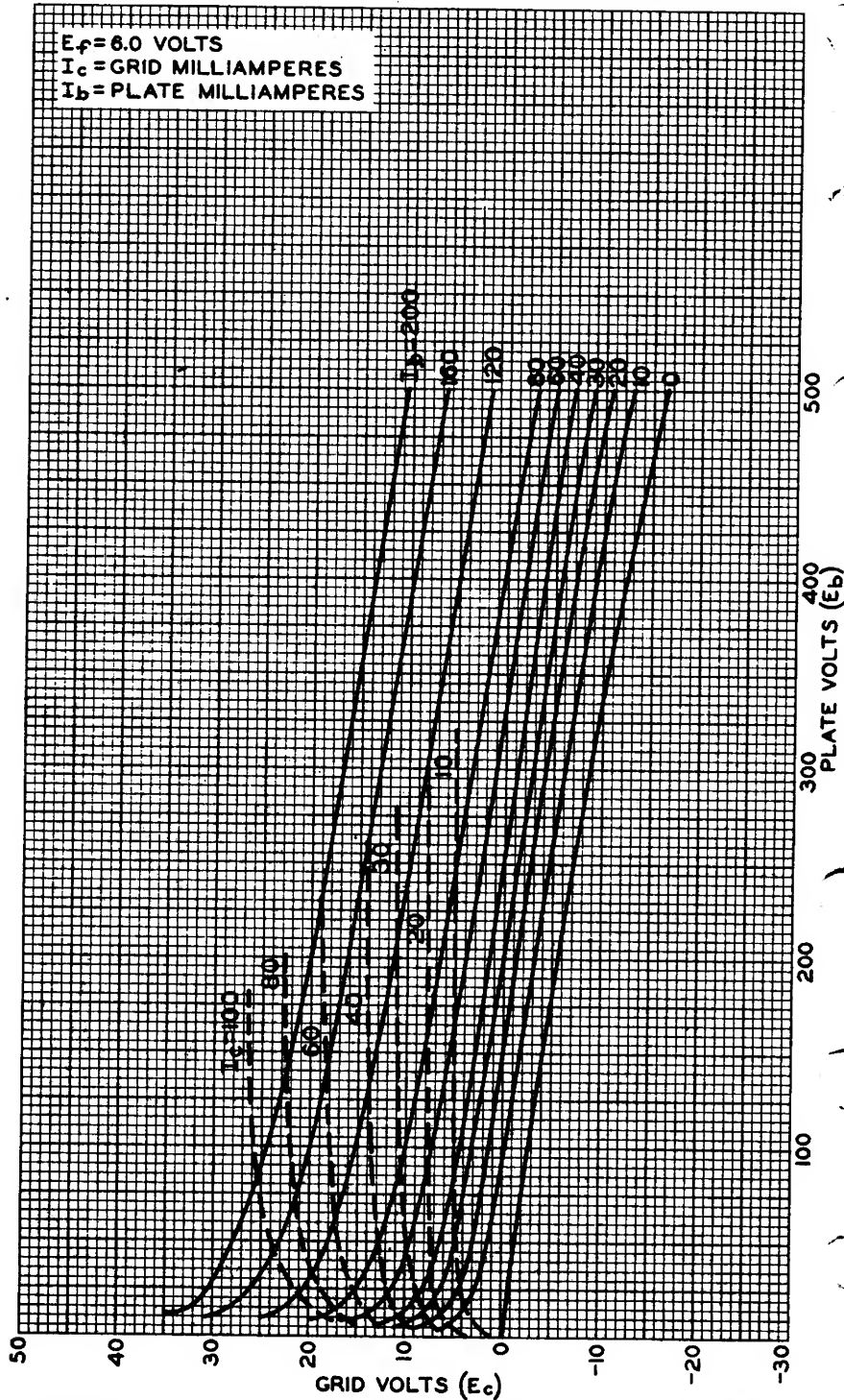


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AVERAGE CONSTANT-CURRENT CHARACTERISTICS



OCT. 8, 1953

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92CM-8106